ENGLISH

DEUTSCH

FRANÇAIS

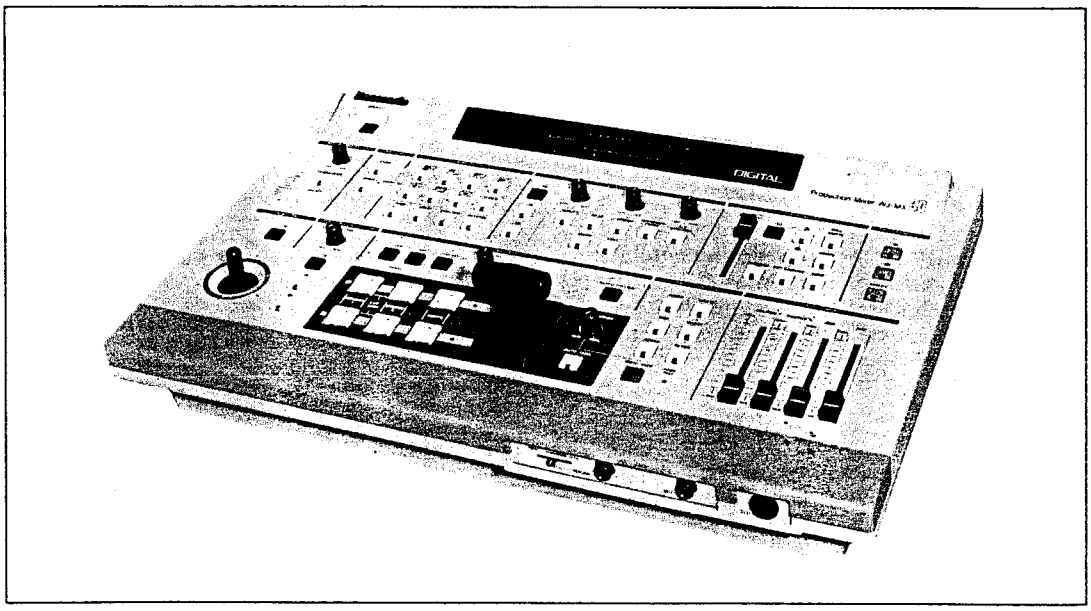
ITALIANO

ESPAÑOL

Operating Instructions

Production Mixer

WJ-MX30



Panasonic

Before attempting to connect or operate this product, please read these instructions completely.

ENGLISH VERSION

This model conforms to the EC directive (for radio interference) 87/308/EEC.

Cet appareil est conforme aux prescriptions de la directive 87/308/C.E.E. (concernant les interférences radio).

Dit model is onderworpen aan de EEG-richtlijn (fer voorkoming van radio-interferentie) 87/308/EGG.

Denne model oplylder EF direktiv 87/308/EF (for forebyggelse af radiointerferens).

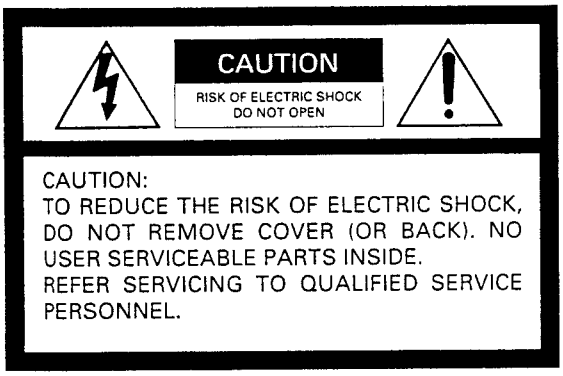
Este modelo cumple con la norma EC (para interferencias de radio 87/308/EEC).

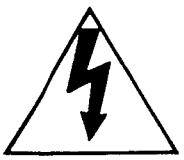
For Australia

THIS APPARATUS MUST BE EARTHED.

To ensure safe operation the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring. Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.
The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

CAUTION:
Before attempting to connect or operate this product, please read the label on the bottom.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

The serial number of this product may be found on the bottom of the unit.
You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. _____

Serial No. _____

For U.K.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 13 amp fuse is fitted i n this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amp and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark or the BSI mark on the body of the fuse.
If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.
WARNING: This apparatus must be earthed.

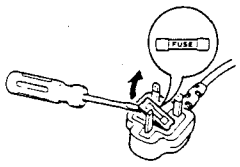
IMPORTANT

The wires in this mains lead are coloured in accordance with the following code.

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.
The wire which is coloured **green-and-yellow** must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol ⏚ or coloured **green** or **green-and-yellow**.
The wire which is coloured blue must be connected to the terminal in the plug which is marked with the letter N or coloured **black**.
The wire which is coloured **brown** must be connected to the terminal in the plug which is marked with the letter L or coloured **red**.

How to replace the fuse
Open the fuse compartment with a screwdriver and replace the fuse and fuse cover.



This model conforms of the EC directive (for radio interference) 87/308/EEC.

This apparatus was produced to BS 800:1987.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

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PREFACE

The Panasonic Production Mixer WJ-MX30 is designed for use in producing special-effect images by utilizing the built-in Frame Synchronizer and other digital processing circuits. In addition to the Mix Effect of the conventional Production Mixer, the WJ-MX30 offers such features as Luminance Key function, Digital Effect, Downstream Key Effect, Wipe Effect, Fade Control, Memory and many more.

This operating manual is intended to explain the Generator's many operational features. With the WJ-MX30 and your imagination there are many possible function combinations which are left to your creativity.

MAIN FEATURES

1. Built-in Frame Synchronizers for A-bus and B-bus.
2. Three audio/video source inputs.
3. Digital Effects such as Nega, Mosaic, Mono, Paint, Still, Strobe, Scramble and AV Synchro.
4. Several combinations of the Luminance Key, Mix, and/or Wipe.
5. 107 Wipe-pattern combinations are available.
6. 9 standard background matte-colours are available from the Matte Generator.
7. Audio fade, DSK fade and/or video fade are available either independently or in combination.
8. The interval time for Auto-Fade and Auto-Take can be adjusted independently.
9. The audio level can also be linked with the movement of the Wipe lever.
10. Up to 8 events can be stored in the memory.
11. Advance Sync signal output connectors for use with VTR editing systems.
12. External key function is provide.
13. Reset function for returning to the preset condition at the factory.
14. The modes selected by buttons will be kept by memory backup approximately 1 week even if AC power is disconnected.

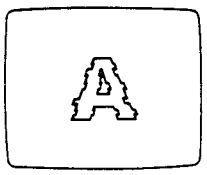
PRECAUTIONS

The WJ-MX30 is a sensitive, high quality instrument and should be treated with care. Because it is an electrical device, the danger of electric shock exists if it is used inappropriately.

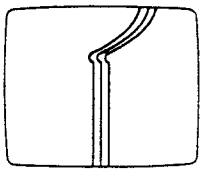
DON'T	DO'S
× Do not attempt to disassemble the instrument. In order to prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside.	• Do refer all servicing to qualified service personnel.
× Do not abuse the instrument. Avoid striking, shaking, etc. It could be damaged by improper handling or storage.	• Do handle the instrument with care.
× Do not use strong or abrasive detergents when cleaning the instrument body.	• Do use a dry cloth to clean the instrument when dirty. In case the dirt is hard to remove, use mild detergent and wipe gently.
× Do not expose the instrument to water or moisture, and do not operate it in wet or humid areas.	• Do take immediate action if the instrument becomes wet. Turn power off and refer servicing to qualified service personnel. Moisture can damage the instrument and also create a danger of electric shock.
× Do not use the instrument in an extreme environment o extremely high temperature or high humidity.	• Use the instrument under ambient conditions of 0°C to 40°C in temperature, and below 90% in humidity.

IMPORTANT POINTS FOR VIDEO INPUT SIGNAL

(1) Failure of input video signals to meet the PAL colour standard can cause a disturbance of synchronization. (The picture may jitter or tear)
(2) A very low input signal to noise ratio (S/N) may result in a low quality picture.
(3) A very jittery source input video signal, for example, a poor VTR playback signal can cause a disturbance in synchronization or colour.
(4) Tracking noise on the TV monitor can cause a disturbance in synchronization. It is necessary to adjust the tracking control of the input VTR.
(5) When either a character generator signal or character input from a key camera is supplied, the edge of the characters might become rough as shown below under certain electronic conditions.



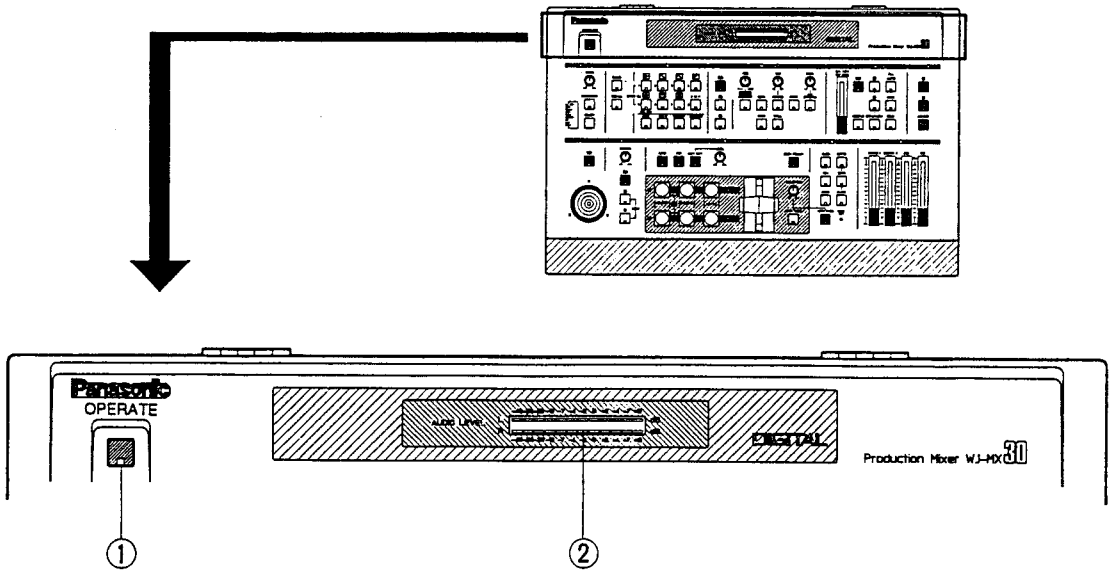
(6) Flag waving (top of picture curls) may appear when a certain VTR is used to supply input signal. (due to AFC time constant)



(7) When an external key video signal is supplied to the EXT. CAMERA IN connector, it will be used as a reference sync signal for the WJ-MX30. A jittery VTR playback signal, if used as such, can cause a disturbance in synchronization.

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

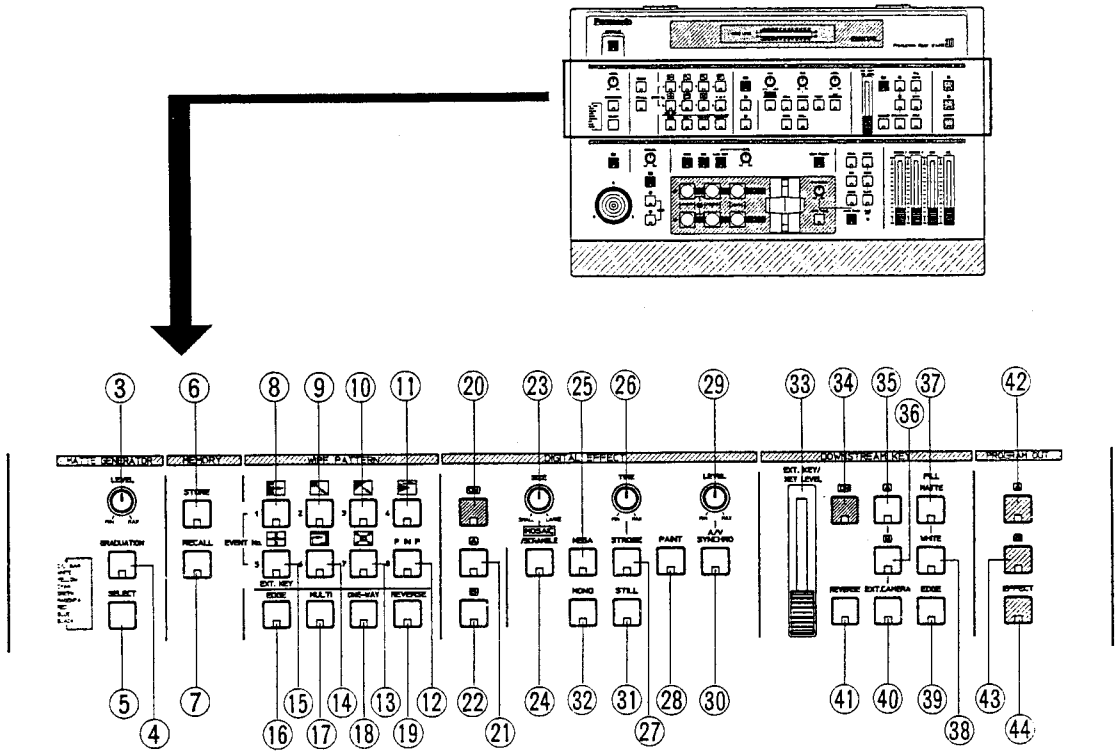
■ TOP VIEW 1



1. **Power On/Off Button (OPERATE)**
   Press this button to switch this unit on.
   The LED on this button lights and the following LEDs light up at the same, Effect On/Off Button (20), Effect-out Button (44), One-way Button (18), Straight Wipe Button (8), Effect-A Button (21), DSK-A Button (35), Fill Matte Button (37), Wipe Select Button (51), Source 1 on A-bus Button (55), Source 2 on B-bus Button (56), Audio Follow On/Off Button (59) and Black Fade Button (68).
   Note:
   The Main Power Switch (98) (located on the back) must be turned on before this switch is pressed.

2. **Audio Level Indicator (AUDIO LEVEL)**
   This indicator indicates the audio output levels of the Program Out-1 Audio Output Jacks (89) and the Program Out-2 Audio Output Jacks (92).

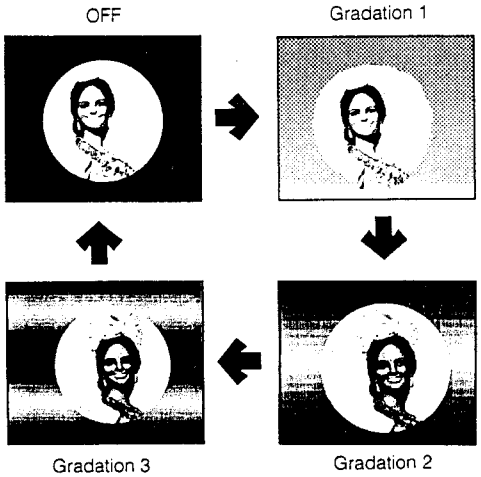
■ TOP VIEW 2



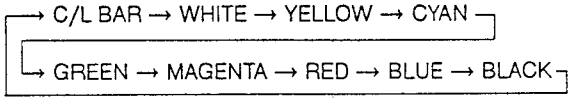
• Matte Generator Section

3. Matte Colour Control (LEVEL, MIN/MAX)
The Chroma Level of Matte Colour can be adjusted with this control except C/L Bar.

4. Graduation Button (GRADUATION)
The matte colour of the upper portion on the screen is less intense and gradually increases toward the lower portion of the screen.
The any of three graduation of three-pattern can be selected by pressing this button as shown below.



5. Matte Colour Selector (SELECT)
Any one of 9 Matte Colours - Colour Bar, White, Yellow, Cyan, Green, Magenta, Red, Blue and Black - can be selected by repeatedly pressing either of these buttons as shown below.



• Memory Section

6. Store Button (STORE)
This button is used to store the preset status of all function settings in the memory.

7. Recall Button (RECALL)
This button is used to recall the status data that is stored in the memory using the Store Button (6).

• Wipe Pattern Section

8. **Straight Wipe Button**
   This button is for a video scene wipe with a straight line. Four patterns are available.
   It is also used as Event Number Button 1.

9. **Corner Wipe Button**
   This button is for a video scene wipe with a square from a corner of the monitor screen. Four patterns are available.
   It is also used as Event Number Button 2.

10. **Diagonal Wipe Button**
    This button is for a video scene wipe with a diagonal shape. Four patterns are available.
    It is also used as Event Number Button 3.

11. **Triangle Wipe Button**
    This button is for a video scene wipe with a triangle sharp. Four patterns are available.
    It is also used as Event Number Button 4.

12. **Picture-in-Picture Button (P IN P)**
    By pressing this button repeatedly, the picture-in-picture of four types is displayed on the screen.
    And also this is used as Event Number Button 8.
    The position of the picture-in-picture can be chosen by using the Positioner On/Off Button (45).
    When the Audio Follow Button (59) is pressed to turn on in the picture-in-picture mode, the audio level ratio between the A-bus and B-bus changes according to the position of the Mix/Wipe Lever (58).
    Refer to the Audio Follow Operation on page 25.

13. **Square Wipe Button**
    Four wipe patterns can be selected by pressing this button repeatedly.....circle, oval, square and diamond.
    The Positioner /RGB Control Joystick (46) can be used with these patterns.
    It is also used as Event Number Button 7.

14. **Mosaic Wipe Button**
    A mosaic-like wipe pattern is obtained by pressing this button. Four patterns are available by repeatedly pressing this button.
    It is also used as Event Number Button 6.

15. **Split Wipe Button**
    A video scene is split in the centre of the image by pressing this button. Three kinds of patterns are available by repeatedly pressing this button.
    It is also used as Event Number Button 5.
    And by pressing this button 4 times, the External key function is available.

16. **Wipe Edge Button (EDGE)**
    This button is used for selecting a border wipe edge.
    Pressing this button once selects a narrow border.
    Pressing this button a 2 time selects a wide border.
    Pressing this button a 3 time selects a faint border.
    A border colour can be applied from complementary colour of matte colour which is selected by the Matte Colour Selector (5).
    Refer to Wipe Edge on page 18.

17. **Multi Wipe Button (MULTI)**
    A wipe pattern can be multiplied by pressing this button repeatedly.
    The wipe buttons (8), (9), (10), (11), (13) and (15) are operative with this button.
    The effect of the multiplication depends on the wipe pattern.

18. **One-way Button (ONE-WAY)**
    When this button is pressed, the wipe scene moves one way each time the Mix/Wipe Lever (58) is shifted. Without using this function, the wipe scene moves alternately with the shifting the Mix/Wipe Lever (58).

19. **Reverse Button (REVERSE)**
    When this button is pressed, the movement of the wipe scene is reversed.

• Digital Effect Section

20. **Effect On/Off Button (ON)**
    The selected Digital Effect Function becomes operative by pressing this button.

21. **Digital Effect A-Button (A)**
    A digital effect is produced on the video signals on A-bus by pressing this button (if the Effect On/Off Button (20) is first pressed).
    The condition of A-bus on which Digital Effects are produced can be seen by pressing this button. (The selected buttons light.)

22. **Digital Effect B-Button (B)**
    A digital effect is produced on the video signal on B-bus by pressing this button (if the Effect On/Off Button (20) is first pressed).
    The condition of B-bus on which Digital Effects are produced can be seen by pressing this button. (The selected buttons light.)

23. **Mosaic Size Control (SIZE)**
    The size of mosaic pattern pieces can be adjusted by turning this control.

24. **Mosaic/Scramble Button (MOSAIC/SCRAMBLE)**
    By pressing this button, mosaic-like pattern and scramble pattern can be selected.
    Pressing this button once selects a mosaic-like pattern.
    The size of mosaic squares can be changed using the Mosaic Size Control (23).
    Pressing this button a second time selects a scramble pattern.
    The size of the scramble cannot be changed.

25. **Negative Button (NEGA)**
The on-screen image can be transposed to look like a negative visual image by pressing this button.

26. **Strobe Interval Time Control (TIME)**
The time of interval for the strobe effect can be adjusted by this timer. Also this timer works with the A/V Synchro function. In this case, the A/V Synchro interval applies to the Strobe effect.

27. **Strobe Button (STROBE)**
Video frames can be frozen intermittently to achieve a strobe effect by pressing this button. The strobe interval can be adjusted by the Effect Interval Time Control (26) from approximately 0.03 seconds to 2.1 seconds.

28. **Paint Button (PAINT)**
The image can be transformed to resemble an oil painting in a video scene by pressing the button.
Four patterns are available by repeatedly pressing this button.

29. **A/V Synchro Control (LEVEL)**
This control adjusts the trigger sensitivity of the A/V Synchro. When this control is turned to the MAX position, the A/V Synchro will be triggered by (a higher threshold) high level sounds. When this control is turned to the MIN position, the A/V Synchro will be triggered by (a lower threshold) low level sounds.

30. **A/V Synchro Button (A/V SYNCHRO)**
Any combination of the digital effects (Nega, Mosaic, Mono, Paint, Still, Scramble or Strobe) can be synchronized to pulse with certain levels of accompanying music or sound supplied to this unit.

31. **Still Button (STILL)**
An instant still or frozen image can be obtained by pressing this button.

32. **Mono Colour Button (MONO)**
When this button is pressed, source video signal produce a monochrome scene. This function has a priority to the Colour Correction function in operation.

• Downstream Key Section

33. **Key Slide Control (EXT. KEY/KEY LEVEL)**
This slide control is used to adjust the sensitivity of the luminance level of the DSK and EXT key signal.

34. **DSK On/Off Button (ON)**
This button is pressed to activate the Downstream Key (DSK) effect.

35. **DSK-Button (A)**
When this button is pressed, the Source Video Signal on the A-bus will become a Key-source signal.

36. **DSK-B Button (B)**
When this button is pressed, the Source Video Signal on the B-bus will become a Key-source signal.

37. **Fill Matte Button (FILL MATTE)**
When this button is pressed, the Matte Colour generated by the MATTE GENERATOR will be used as a Key-Fill Signal to be overlaid on the Key-source signal.

38. **White Button (WHITE)**
When this button is pressed, the white colour will be used as a Key-Fill Signal to be overlaid on the Key-Source Signal.

39. **Edge Button (EDGE)**
This button is used to edge Downstream Keyed images. Five kinds of edges are available by pressing this button repeatedly.
Notes :
1. When the Downstream Keyed images are white, you can colour the edges in any of 9 colours, solid or graded using the Graduation Button and the Matte Colour Selector.
2. When Matte Coloured Downstream Keyed images are used, the edges are always black.

40. **Ext. Camera Button (EXT. CAMERA)**
When this button is pressed, the external camera which is connected to the External Camera Input (84) or (85) can be used for Key-source signals.

41. **Key Reverse Button (REVERSE)**
The polarity of Downstream Keyed Images will be reversed by pressing this button.

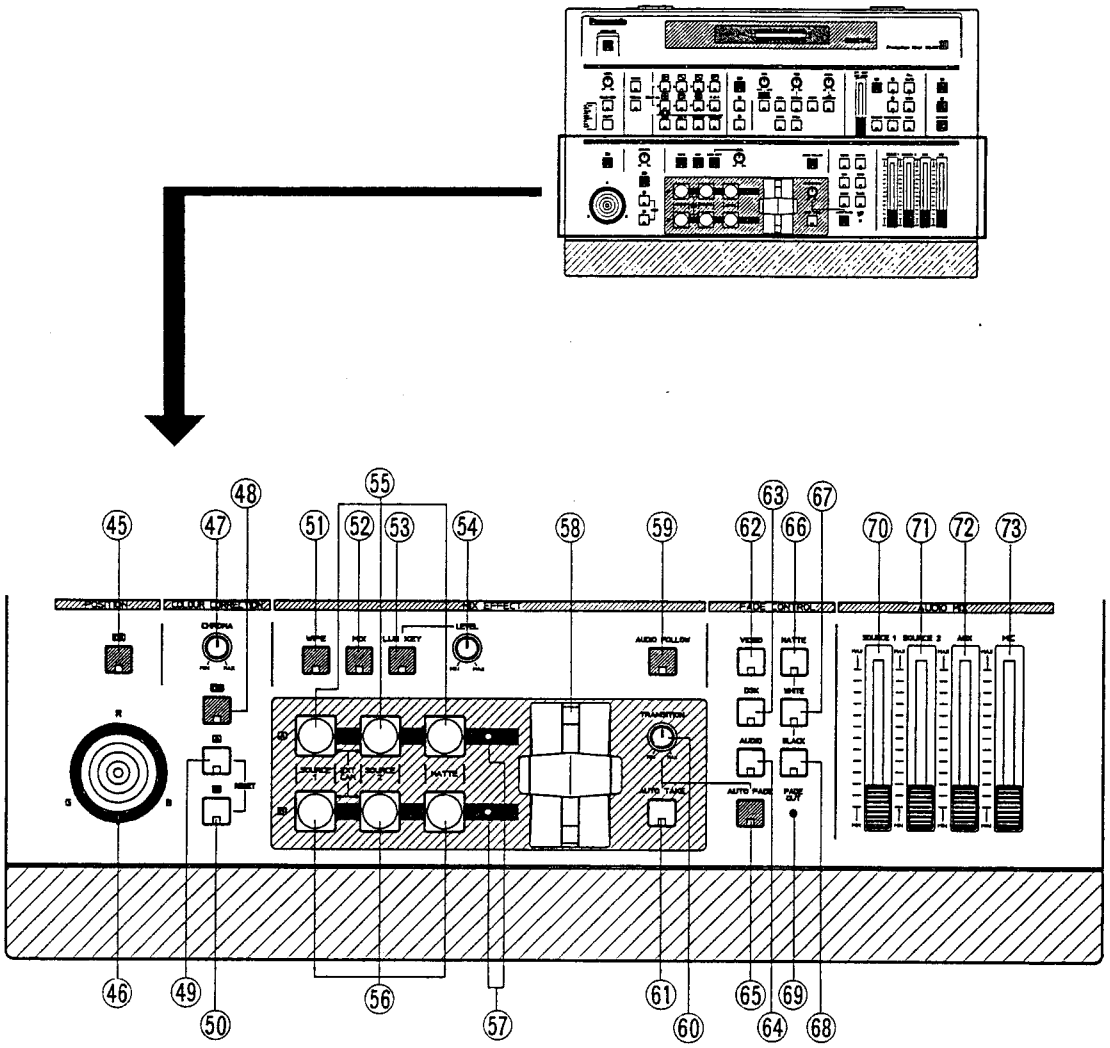
• Program Output Section

42. **Program Out-A Button (A)**
When this button is pressed, the A-bus Source signals with effects produced the functions in the Digital Effect section are available at the Program Output Connectors.

43. **Program Out-B Button (B)**
When this button is pressed, the B-bus Source signals with effects produced by the functions in the Digital Effect function are available at the Program Output Connectors.

44. **Effect-Out Button (EFFECT)**
When this button is pressed the final video signal with or without effects is available at the Program Output Connector.

■ TOP VIEW 3



• Position Section

45. Position On/Off Button (ON)
This button must be pressed to set the position of a wipe pattern freely using the Positioner/RGB Control Joystick (46).

46. Positioner/RGB Control Joystick
This joystick has two functions of setting the position of a wipe pattern and controlling the hue of the source video signal (A or B).
When the Position On/Off Button (45) is pressed on, this joystick functions as the positioner.
When the Colour Correction On/Off Button (48) is pressed on, this joystick functions as the RGB control.
When it is in the centre, it generates the original colour of the source video signal.

• Colour Correction Section

47. Chroma Level Control (CHROMA)
This control adjusts the colour level of the images from the Source Video Signal. When this control is set to the centre position, it generated the original colour level of the Source Video Signal.

Note :
Noise may be recorded on tape when this control is set to the MAX position if colour input signals are excessive.

48. Colour Correction On/Off Button (ON)
This button must be pressed to correct the colour of the source video signal.

49. Colour Correction-A Button (A / RESET)
Colour correction can be made on the A-bus Source Video Signal by pressing this button. When you press it once, the LED starts blinking, the chroma level can be adjusted by using the Chroma Level Control (47).
When you press it a second time, the LED remains lighted, and the hue can be adjusted by using the Position/RGB Control Joystick (46). Chroma level can also be adjusted by using the Chroma Level Control (47).
It is also used as Reset Button.
Refer to OPERATION on page 13.

50. Colour Correction-B Button (B / RESET)
Colour correction can be made on the B-bus Source Video Signal by pressing this button. When you press it once, the LED starts blinking, the chroma level can be changed by using the Chroma Level Control (47).
When you press a second time, the LED remains lighted, the hue can be changed by using the Position/RGB Control Joystick (46). Chroma level can also be adjusted by using the Chroma Level Control (47).
It is also used as Reset Button.
Refer to OPERATION on page 13.

• Mix Effect Section

51. Wipe Selection Button (WIPE)
This button is pressed to obtain a wipe effect on the A-bus Source Video Signal and the B-bus Source Video Signal depending on the setting of the Wipe Pattern Select Buttons.
Note :
It is also used as automatic demonstration button. Press the Power On/Off Button to turn off. Then press the Power On/Off Button again to turn on while pressing both of this button and Mix Select Button (52).

52. Mix Select Button (MIX)
This button is pressed to obtain a mix effect on the A-bus Source Video Signal and the B-bus Source Video Signal.

53. Luminance Key Select Button (LUM KEY)
The Luminance Key effect is obtained by pressing this button and adjusting the Luminance Key Level Control (54). The B-bus Source Signal must be the key signal.

54. Luminance Key Level Control (LEVEL)
This control is used to adjust the Luminance Key Level.

55. A-bus Buttons (A)
These buttons are used to select the desired audio/video signals allocated to the A-bus input. The Source 1/2 corresponds to the Source 1/2 audio/video inputs on the rear panel of the instrument.
By pressing the Source 1 and 2 buttons on the A-bus simultaneously, External Camera Signals can be selected.

56. B-bus Buttons (B)
These buttons are used to select the desired audio/video signals allocated to the B-bus input. The Source 1/2 corresponds to the Source 1/2 audio/video inputs on the rear panel of the instrument.
By pressing the Source 1 and 2 buttons on the B-bus simultaneously, the External Camera Signals can be selected.

57. Mix/Wipe LED
When the A-bus (B-bus) LED remains lighted and the Wipe / Mix LED blinks, the Wipe / Mix effect is only partially produced on the A-bus (or B-bus) side.

58. Mix/Wipe Lever
In wipe mode, manually moving this lever between the A-bus and B-bus will increase the relative portion of each bus signal according to the option selected. In mix mode, the audio and video are switched together on the A-bus and B-bus.

59. Audio Follow Button (AUDIO FOLLOW)
By pressing this button, the audio on the A-bus and B-bus can be changed according to the relative percentage position of the Mix/Wipe Lever (58).

60. Auto Fade/Take Transition Control (TRANSITION)
This control adjusts the automatic fading/auto-take interval time from 0 to 510 frames at 2-frame increments.

61. Auto Take Button (AUTO TAKE)
The auto take effect-Automatic Wipe / Mix-can be executed by pressing this button. This button lights during the Auto-take interval.

• Fade Control Section

62. Video Fade Button (VIDEO)
Video program output signal fade-in or fade-out is available with this button.
Use the Auto Fade Button (65) to select fade-out or fade-in.

63. DSK Fade Button (DSK)
Downstream Keyed signal fade-in or fade-out is available with this button.
Use the Auto Fade Button (65) to select fade-out or fade-in.

64. Audio Fade Button (AUDIO)
Fade-in or fade-out of the audio recording output is available with this button.
Use the Auto Fade Button (65) to select fade-out or fade-in.
Note :
The fade-out or fade-in of Head phone output is cannot be selected.

65. Auto Fade Button (AUTO FADE)
Press this button on for fade-out.
The LED on this button will light and the fade-out will start.
The transition time can be adjusted using the Auto Fade/Take Transition Control (60).
After fade-out, the LED on this button will go out and Fade Out Indicator (69) will light.
Note:
The Fade Out Indicator blinks during fade-out.
By pressing this button during fade-out, fade-out will be stopped on the way.

66. Matte Fade Button (MATTE)
The video fade signal fades out to the selected Matte Colour when this button is pressed.

67. White Fade Button (WHITE)
The video fade signal fades out to white when this button is pressed.

68. Black Fade Button (BLACK)
The video fade signal fades out to black when this button is pressed.

69. Fade Out Indicator (FADE OUT)
When this LED remains lighted, fade-out is under way.
When this LED blinks, fade-out/fade-in is still incomplete.

• Audio Mix Section

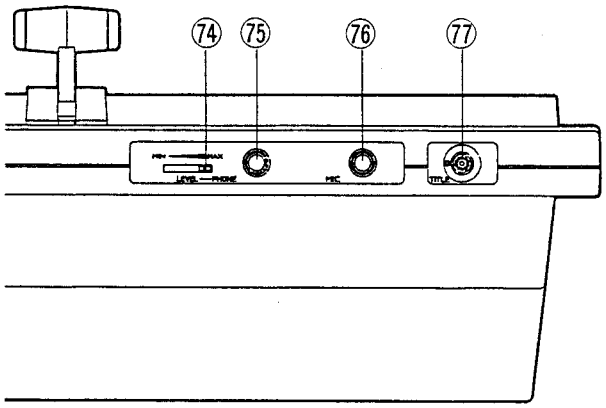
70. Source 1 Audio Fader (SOURCE 1)
The audio level of the Source 1 input can be adjusted by sliding this fader.

71. Source 2 Audio Fader (SOURCE 2)
The audio level of the Source 2 input can be adjusted by sliding this fader.

72. Aux Audio Fader (AUX)
The audio level connected to the Auxiliary Audio Input Jack (86) can be adjusted by sliding this fader.

73. Microphone Fader (MIC)
The audio level connected to the Microphone Jack (76) can be adjusted by sliding this fader.

■ FRONT VIEW



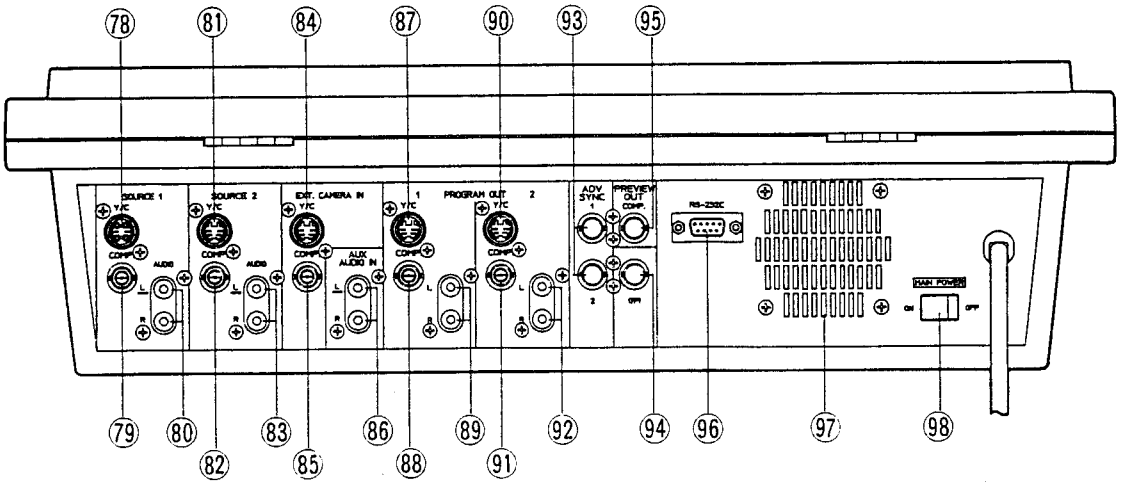
74. Headphone Level Control (LEVEL)
The audio level of the headphone can be adjusted with this control.

75. Headphone Jack (PHONES)
Optional headphone can be connected to this jack.

76. Microphone Jack (MIC)
Optional microphone can be connected to this jack.

77. Title Input Connector (TITLE)
This connector is used to connect the optional Character Generator WJ-KB50 (recommended).
The pin numbers are as follows.
(1) : Character In
(2) : Red
(3) : Ground
(4) : Green
(5) : Sync out
(6) : Blue
(7) : Ground
(8) : +9V Out
(9) : Ground
(10) : ID

■ REAR VIEW



78. Source 1 Y/C Input Connector (SOURCE 1-Y/C)
This connector accepts the S-video signal.
Note :
This input has a priority over that of the COMP. Connector for Source 1. If the S-video signal and the composite signal are both supplied Source 1 at the same time, only the S-video signal is used as a Source 1 Video signal.

79. Source 1 COMP. Input Connector (SOURCE 1/COMP)
This connector accepts a 1.0 Vp-p/75 ohms composite video signal.

80. Source 1 Audio Input Jacks (SOURCE 1/AUDIO L/R)
The Source 1 Audio Input Signal can be supplied via these pin jacks.

81. Source 2 Y/C Input Connector (SOURCE 2-Y/C)
This connector accepts the S-video signal.
Note :
This input has a priority over the COMP. Connector for Source 2. If the S-video signal and the composite signal are both supplied to Source 2 at the same time, only the S-video signal is used as a Source 2 Video Signal.

82. Source 2 COMP. Input Connector (SOURCE 2/COMP.)
This connector accepts a 1.0 Vp-p/75 ohms composite video signal.

83. Source 2 Audio Input Jacks (SOURCE 2/AUDIO L/R)
The Source 2 Audio Input Signal can be supplied via these pin jacks.

84. External Y/C Input Connector (EXT CAMERA IN/Y/C)
The external camera to be used as a Key Source is connected to this connector when the camera signal is S-video.

85. External COMP. Input Connector (EXT CAMERA IN/COMP.)
The external camera to be used as a Key Source is connected to this connector when the camera signal is composite video.

86. Auxiliary Audio Input Jacks (AUX AUDIO IN)
The auxiliary audio input signal can be supplied via these jacks. When an audio signal is supplied to the L-channel, it is also supplied to the R-channel (mono mode) internally. When an audio signal is supplied to the R-channel, it is used for the R-channel only.

87. Program Out-1 Y/C Output Connector (PROGRAM OUT 1/Y/C)
The S-video Program Output Signal-1 is provided via this connector.

88. Program Out-1 COMP. Output Connector (PROGRAM OUT 1/COMP.)
The composite video Program Output Signal-1 is provided via this connector.

89. Program Out-1 Audio Output Jacks (PROGRAM OUT 1 L/R)
The audio output signals of R-channel and L-channel from Program Output 1 are supplied via these pin jacks.

90. Program Out-2 Y/C Output Connector (PROGRAM OUT 2/Y/C)
The S-video Program Output Signal-2 is provided via this connector.

91. Program Out-2 COMP. Output Connector (PROGRAM OUT 2/COMP.)
The composite video Program Output Signal-2 is provided via this connector.

92. Program Out-2 Audio Output Jacks (PROGRAM OUT 2 L/R)
The audio output signals of R-channel and L-channel from Program Output 1 are supplied via these jacks.

93. Advance Sync Output Connectors (ADV SYNC)
In the A/B Roll Editing System, the Advance Sync signal from this connector should be supplied to a playback VTR which does not have a Time Base Corrector (T.B.C.) inside.

Note:

Enough editing accuracy cannot be obtained without this signal.

94. GPI Input Connector (GPI)
Refer to "INTERFACE" on page 28 for details.

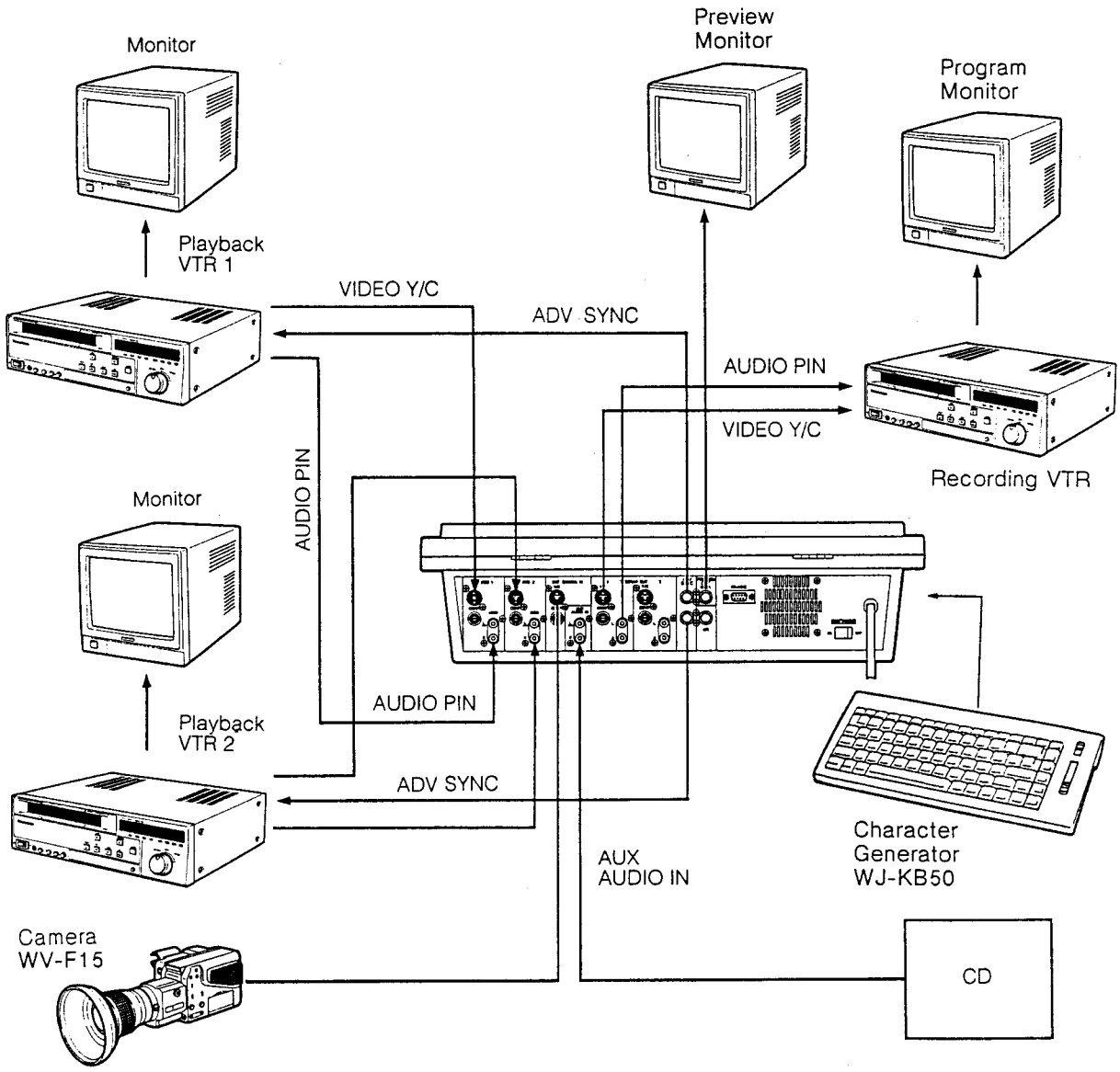
95. Preview Output Connector (PREVIEW OUT, COMP)
The video effect of the composite video signal is obtained at this connector regardless of which Program Out Button is selected, (42) or (43).

96. RS-232C Control Connector (RS-232C)
Ask your the Panasonic Dealer for communication software.

97. Cooling Fan

98. Main Power Switch (MAIN POWER)
The unit is in stand-by mode when this switch is pressed on. Unless this switch is pressed on, the unit will not be on even if the (front panel) Power On/Off Button (1) is pressed.

SYSTEM CONNECTION



The following models (or equivalents) are recommended for this system. The S-video signal and stereo audio signal are also recommended to obtain quality edited outputs.

Production Mixer	WJ-MX30
Character Generator	WJ-KB50
External Camera	WV-F15
Playback VTR	AG-7150
Recording VTR	AG-7350
Monitor TV	

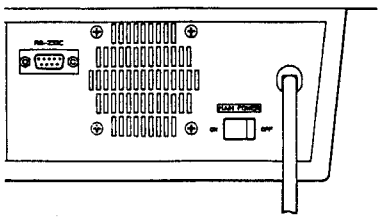
1. Connect coaxial cables between the Advance Sync Output Connectors (93) on this unit and the Advance Sync Input on both playback VTR 1 and VTR 2.
2. Connect audio cables between the Source 1 Audio Input Jack (80) / Source 2 Audio Input Jack (83) on this unit and Audio Output Connector / Audio Input Connector on the playback VTR-1 / VTR-2 / Recording VTR, respectively.
3. Connect S-video cables between the Source 1 Y/C Input Connector (78) / Program Out-1 Y/C Output Connector (87) on this unit and the S-video Out / S-video In Connectors on the playback VTR-1 / VTR-2/ Recording VTR, respectively.
4. Connect an S-video cable from the S-video output connector of the camera to the External Y/C Input Connector (84) on this unit.
5. Connect a coaxial cable between the Preview Output Connector (95) on this unit and the Video Input Connector on the Monitor TV.

OPERATION

A. Pre-Operational Setup

A-1. Power ..... Field Preset Operation mode

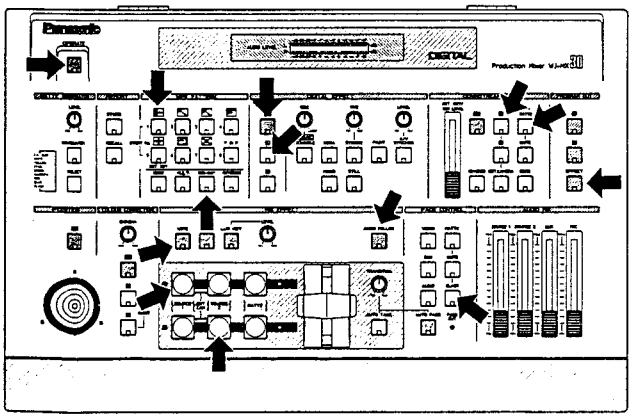
1. Press the MAIN POWER Switch (98) on located on the rear panel. The unit is now in stand-by mode. No operations can be executed yet.



Notes :

- When turning off te MAIN POWER Switch with the OPERATE switch "OFF", this unit is stand-by condition by turning on the MAIN POWER switch.
- When turning off the MAIN POWER switch with the OPERATE switch "ON", this unit is on condition by turning on the MAIN POWER switch if the memory backup is kept.
  In this time, if the memory backup is not kept, this unit is stand-by mode.

2. Press the Power On/Off Button (1) on the operation panel. The unit is now in operation mode and the Cooling Fan (97) located on the rear panel starts to rotate. The LED's on the operation panel light up as shown below.



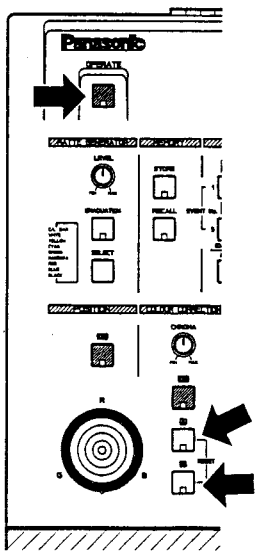
3. And this status, without still and strobe, is later recalled when the power is restored if the memory is kept.

Notes :

1. If you do not use the unit for an extend period of time or to shut off the power completely, switch off the MAIN POWER Switch (98).
2. If the Cooling Fan (97) does not rotate, switch it off and disconnect the AC power cord. Call service personnel before attempting further use.
3. The modes selected by buttons will be kept by memory backup approximately 1 week even if AC power is disconnected.

A-2. Reset ..... Factory Preset Operation mode

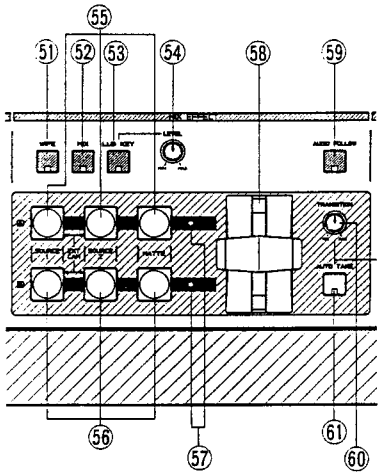
Press the Power On/Off Button (1) off. With both the Colour-A (49) and B (50) Buttons depressed, press the Power On/Off Button (1) on.
It would be helpful in case of unexpected operational failure.



B. Basic Operation 1

B-1. Input/Output Selection

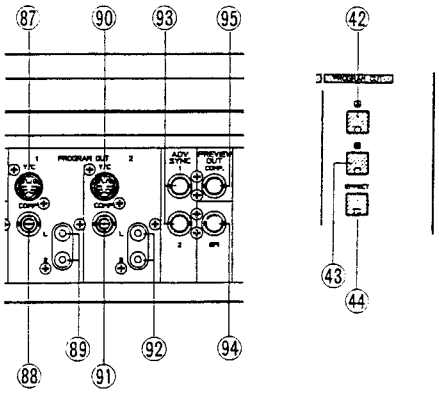
1. **Source Selector**
   The audio/video signal to be input for effects is selected from the respective options on the A-bus and B-bus. The selected audio will be controlled by the AUDIO MIX for the respective A-bus and B-bus.



Notes :

1. When the SOURCE 1 and 2 buttons for A-bus or on B-bus are simultaneously pressed, External Video Signal is available.
2. The MATTE Button for the A-bus or on B-bus is invalid in Double Picture scene of the picture-in-picture mode.

2. **Program Out Selection**



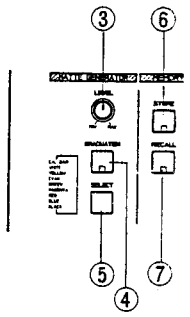
- The audio/video signals to be sent to the PROGRAM OUT-1, -2 connectors (87) (88) (89) (90) (91) and (92) are selected by the appropriate PROGRAM OUT Buttons (42) (43) (44).
- In case the Source Video Signal from the A-bus is to be sent out directly, press the PROGRAM OUT A Button (42). (The Matte Signal will not be sent out. The Source Video whose button is blinking is sent out instead.)
- In case the Source Video Signal from B-bus is to be faded out directly, press the PROGRAM OUT B Button (43). (The Matte Signal will not be sent out. The Source Video whose button is blinking is sent out instead.)
- In case the (operation panel processed) effect video signal is to be sent out, press the EFFECT Button (44).

Note :

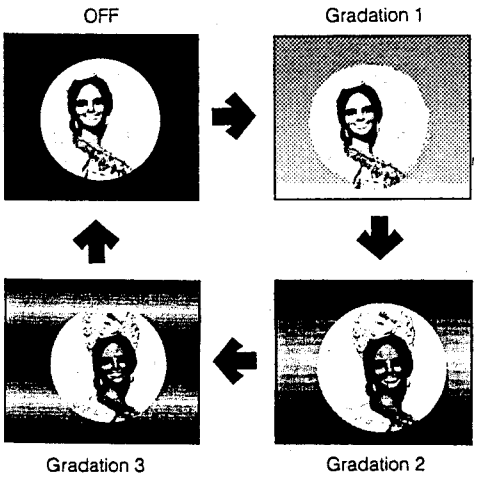
The Source 1 or Source 2 video signal sent out from the PROGRAM OUT connectors (87)-(92) are subject to effects by the Colour Correction, Digital Effect, Position, Downstream Key, Mix Effect and Fade Control. So do not add these effects to the video if you want to see the original source video signal.

B-2. Matte

The MATTE GENERATOR generates 9 matte colours to choose from : Colour Bar (C/L BAR), White, Yellow, Cyan, Green, Magenta, Red, Blue and Black.



- To select a (background) matte colour, press the SELECT Button (5) until the desired colour is obtained.
- To change the chroma level of the selected matte colour, adjust the Matte Colour Control (3). The C/L BAR and BLACK will not be changed. In case WHITE is selected, the brightness changes from black to white.
- When the GRADUATION Button (4) is pressed repeatedly, the Matte Colour is graduated accordingly (per the Matte Colour Control) from top to bottom as shown below.



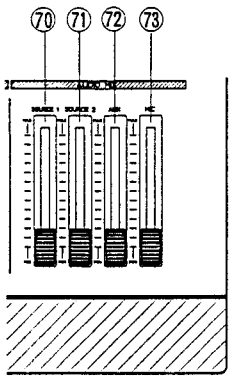
Note :

When a Matte Colour is selected by the Source Selector, it can be used as an alternate source signal for the WIPE (51), MIX (52) functions. However, Matte Colour cannot be used in the following effect operations. In these cases, the Source Video Signal indicated by a blinking source button will be displayed instead of the Matte Colour on the monitor automatically.

1. LUM KEY (53) effect
2. DOWN STREAM KEY effect
3. (FADE CONTROL effect)

B-3. Audio Mixer

The WJ-MX30 has 4 audio source inputs; the Source 1/2, an auxiliary audio input and the external microphone. Each audio level can be adjusted independently by the audio faders.



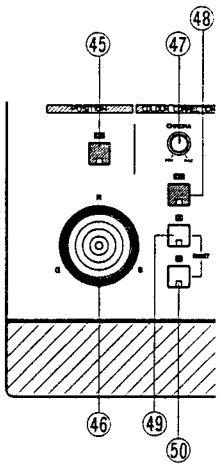
- The Source 1 Fader (70) adjusts the audio level of the Source 1 Audio Signal; the Source 2 Fader (71) adjusts that of the Source 2. The AUX Fader (72) or the MIC Fader (73) adjusts each respective audio input signal accordingly.

B-4. Colour Correction

This function allows colour adjustment from a selected input source, as well as compensation for excessive colour. Using the monochrome effect, a signal tint can be imposed over on the entire scene image.

Notes :

1. Colour Correction will have no effect if the selected source video is a Black/White signal.
2. The MONO Button (32) for DIGITAL EFFECT should be off.
3. The same colour correction should be made on both the A-bus and B-bus signals.



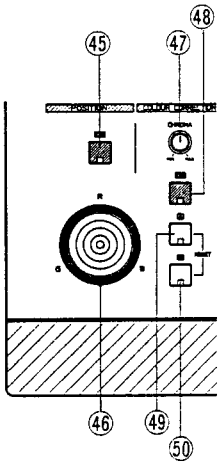
- Press the Colour Correction On/Off Button (48) on.
- To correct the A-bus signal, press the A Button (49) once. The LED starts blinking. In this case only the CHROMA Control (47) corrects the colour of the A-bus signal. If you press the A-Button (49) a second time, the LED lights. The CHROMA Control (47) and the R/G/B Control joystick (46) are then valid for colour correction of the A-bus signal. To make the colour correction function invalid, press the A Button (49) a third time to turn off the LED.
- To correct the B-bus signal, press the B-Button (50) once. The LED starts blinking. In this case only the CHROMA Control (47) corrects the colour of the B-bus signal. If you press the B-Button (50) a second time, the LED lights.
  The CHROMA Control (47) and the R/G/B Control (46) are then valid for colour correction of the B-bus signal. To make the colour correction invalid, press the B-Button (50) a third time to turn off the LED.
- If the CHROMA Control (47) is turned fully to the MIN position and the position of the R/G/B Control (46) to the centre, a Black and White video image is obtained. When adjusting the R/G/B Control (46) from this position, a mono tone (R/G/B) video image is obtained.

Notes :

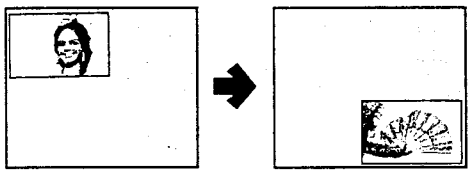
1. A Black and White video image may be obtained in another way. Press the Colour-A Button (49) or Colour-B (50) Button once (The LED blinks). Turn the CHROMA Control (47) fully to MIN position.
2. When pressing the Colour Correction Button to turn on while turning on the Position On/Off Button, the LED on the Position On/Off Button blinks for the stand-by mode, the positioning scene is kept and the colour correction is available.

B-5. Position Control

The position of a specific wipe pattern can be changed on the monitor screen using Position Control function.



- Press the Square Wipe Button (13) and select the desired wipe pattern by pressing this button repeatedly.
- Press the Position On/Off Button (45) on. The LED on this button lights. (Wipe size is doubled.)
- Adjust the Mix/Wipe Lever (58) to obtain the desired wipe size.
- Operate the Positioner Joystick (46). The position of a wipe scene can be changed on the monitor screen.



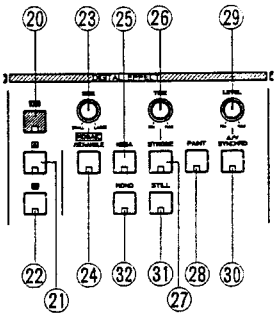
Note :

When pressing the Position On/Off Button to turn on while turning on the Colour Correction On/Off Button, the LED on the Colour Correction On/Off Button blinks for the stand-by mode and the corrected colour scene is kept and position control is available.

C. Basic Operation 2

Digital Effect block

The following is a detailed description of the Digital Effect block function which generates digital special effects for the A-bus and B-bus source video signals. In order to add the desired effect(s) to the A-bus (B-bus) signal, press the A-Button (21) (B-Button (22)) and the ON-Button (20).

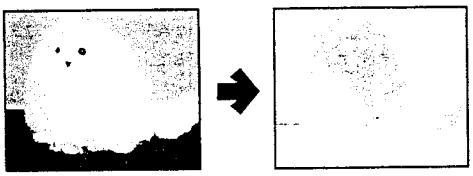


Notes :

1. The selected effect(s) can be added to either the A-bus or B-bus at one time.
2. Without pressing the Effect On/Off Button (20), the digital effect(s) will not added to the A-bus or B-bus signal.

1. **Negative**

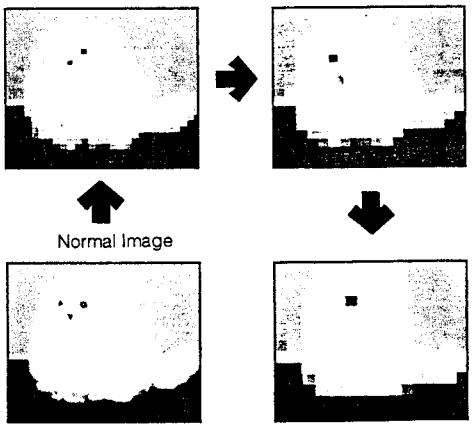
Press the NEGA Button (25). A negative image (like a film negative) is obtained. Colour correction can also be used with this function.



Normal Image　　Negative Image

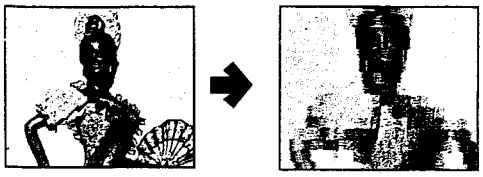
2. **MOSAIC**

Press the MOSAIC Button once (24). A mosaic-like or box-like pattern is obtained. Mosaic pattern size can be adjusted continuously at 31 steps with SIZE Control (23).



Normal Image

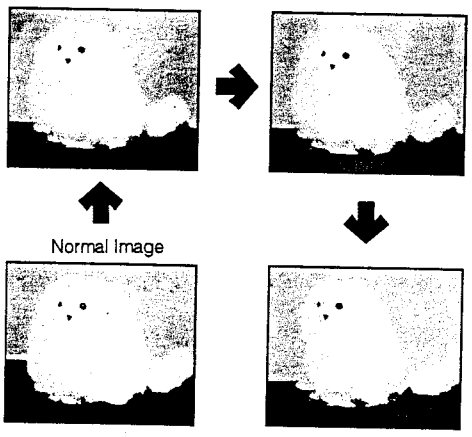
3. **Scramble**
Press the MOSAIC Button a second time. The LED on this button blinks. A scramble-like pattern is obtained. Scramble pattern size is not adjustable.



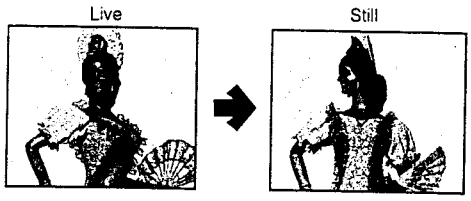
Normal Image Scramble Image

4. **Monochrome**
Press the MONO Button (32). A black and white image can be obtained.

5. **Paint**
Press the PAINT Button (28). An oil-paint touch image can be obtained. Four kinds of pattern are available.

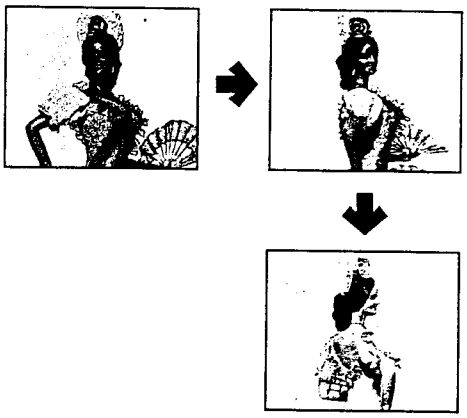


6. **Still**
Press the STILL Button (31). An instant or frozen image at any point of the selected video input will be obtained.

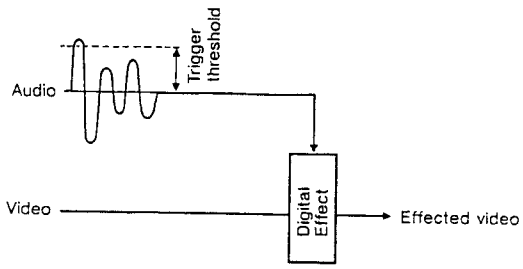


Note:
Strobe mode cannot be used in Still mode. Still mode becomes off automatically.

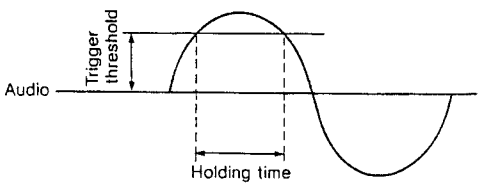
7. **Strobe**
Press the STROBE Button (27). A stroboscopic image like a series of still images is produced in slow motion at intervals of 0.03 to 2.1 seconds. These intervals can be adjusted by the Effect Interval Time Control (26).



8. **A/V Synchro**
Press the A/V SYNCHRO Button (30). The music or sound supplied to the WJ-MX30 can trigger other selected Digital Effect(s).



Notes :
1. The trigger threshold can be adjusted by the LEVEL Control (29).
2. A/V Synchronization holds the desired effect(s) of Nega, Mosaic, Mono, Paint and Still for a certain period once triggered. The holding time varies as shown below.

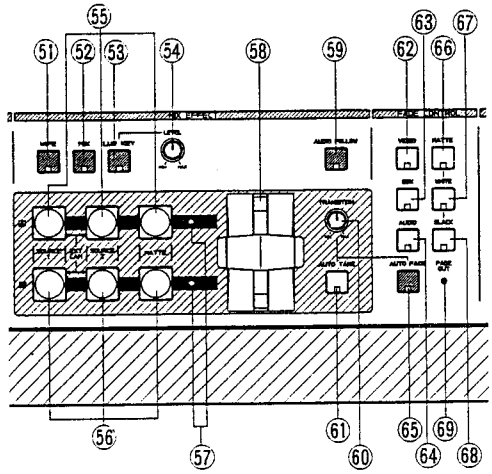


3. A/V Synchronization holds the Strobe effect for the period adjusted by the Effect Interval Time Control (26).

D. Basic Operation 3

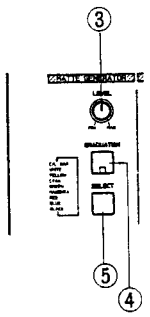
Mix and Wipe Block

The following is a detailed description of the Mix and Wipe block, which consists of three functions ..... Mix, Wipe and Luminance Key.



D-1. Mix

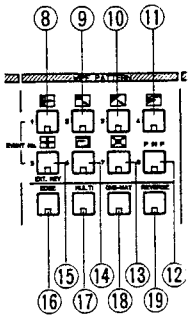
- Press the MIX Button (52).
- Select source signals from the A-bus (55) and B-bus (56). In case the MATTE colour is selected, colour choice is available with the SELECT buttons (5) in the MATTE GENERATOR section.



- Operate the Mix/Wipe Lever (58) from the A-bus to B-bus, or vice versa to perform the desired mixing.
- Notice that the following Mix/Wipe LED's (57) light as appropriate.
  (1) A-bus : ON → A-bus image fully displayed on the screen.
  (2) A-bus : Blinking → A-bus image (stronger) and B-bus image (weaker) on the screen.
  (3) B-bus : Blinking → A-bus image (weaker) and B-bus image (stronger) on the screen.
  (4) B-bus : ON → B-bus image fully displayed on the screen.

D-2. Wipe

Wipe patterns are produced from the WIPE PATTERN block as shown below.



1. Wiping

- Press the WIPE Button (51).
- Select source signals from the A-bus (55) and the B-bus (56). In case MATTE is selected, colour choice is available with the SELECT buttons (5) in the MATTE GENERATOR section.
- Select and press the desired Wipe Pattern Select Button.
- Select and press the desired the Wipe Edge Buttons and Wipe Direction Buttons.
- Operate the Mix/Wipe Lever (58) from A-bus to B-bus, or vice versa. Wipe is thus performed.
- Notice that the Mix/Wipe LED's (57) light as follows.
  (1) A-bus : ON → A-bus image fully displayed on the screen.
  (2) A-bus : Blinking → The Mix/Wipe Lever (58) moves to halfway done.
  (3) B-bus : Blinking → The Mix/wipe Lever (58) moves after halfway done.
  (4) B-bus : ON → B-bus image fully displayed on the screen.

Notes :

1. Wipe patterns can be generated using the Wipe Pattern Select Buttons.
2. Each generated wipe pattern can be selected for the Wipe Edge function and the Wipe Direction function by pressing the appropriate Wipe Edge Buttons and Wipe Direction Buttons.

2. Wipe Edge

- Press the Edge Button (16) once to add a narrow border between wipe images. By pressing the same button a second time, the border becomes wide. A third press of the button makes a faint border between the two video images at the wipe margin. (No matte colours available.) A fourth press of the button eliminates the border entirely.
- Press one of the Matte Colour Selectors (5) to select and add the desired colour to the border. (The complementary colour of Matte Colour is applied.)

Narrow Border
with Matte Colour

Wide Border
with Matte Colour

Faint border
without Matte Colour

Note :

In case of the picture-in-picture mode, 5 types border is available by pressing the Edge Button repeatedly as shown below.

once press	a narrow border
second press	wide border
third press	faint border
fourth press	shadow

(Shadow)

fifth press shadow with border

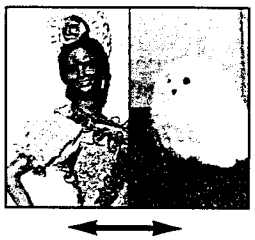
(Shadow with border)

Sixth press of this button eliminates the border entirely.

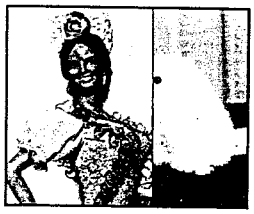
3. Wipe Direction

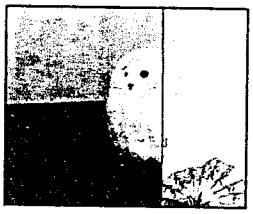
- Press the ONE-WAY Button (18). The wipe scene moves the same way each time the Mix/Wipe Lever (58) is operated.

- Press the REVERSE Button(19). The movement of the wipe scene is reversed.



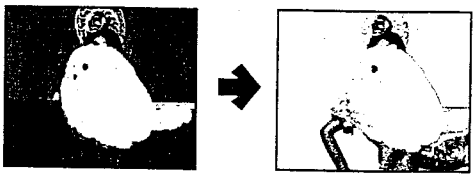
- Press both the ONE-WAY Button (18) and REVERSE Button (19). The combination of these two functions will allow for symmetrical screen wiping.





D-3. Luminance Key

- Move the Mix/Wipe Lever (58) all the way to the B-bus position.
- Press the LUM KEY Button (53).
- Adjust the LEVEL Control (54) to the desired clear key picture threshold.



Note :

By adjusting the Mix/Wipe Lever (58) to the A-bus position, a mixing effect can be obtained.

D-4. Pattern Table

- Up to 107 wipe patterns are available using the Pattern Selection Buttons (28 patterns).

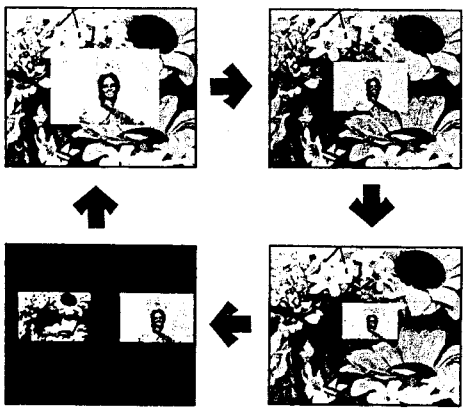
Wipe Patterns	Times of Pressing Button (Wipe number for RS232C)	Basic		MULTI 1		MULTI 2		MULTI 3		MULTI 4 (Blinds)	
		NOR	REV	NOR	REV	NOR	REV	NOR	REV	NOR	REV
	1 time (01)										
	2 times (02)										
	3 times (03)										
	4 times (04)										
	1 time (05)										
	2 times (06)										
	3 times (07)										
	4 times (08)										
	1 time (09)										
	2 times (10)										
	3 times (11)										
	4 times (00)	External key pattern									
	1 time (12)										
	2 times (13)										
	3 times (14)										
	4 times (15)										

Wipe Patterns	Times of Pressing Button (Wipe Number for RS-232C)	Basic		MULTI 1		MULTI 2		MULTI 3		MULTI 4 (Blinds)	
		NOR	REV	NOR	REV	NOR	REV	NOR	REV	NOR	REV
	1 time (16)										
	2 times (17)										
	3 times (18)										
	4 times (19)										
	1 time (20)										
	2 times (21)										
	3 times (22)										
	4 times (23)										
	1 time (24)										
	2 times (25)										
	3 times (26)										
	4 times (27)										

D-5. Picture-in-Picture

Press the WIPE Button (51) to turn on.

Press the Picture-in-Picture Button (12). Move the Wipe/Mix Lever (58) to the B-bus position from the A-bus position. The following patterns can be selected by pressing this button.



Double Picture-in-Picture mode

By using the Positioner Joystick (46), the position of the picture-in-picture scene can be changed on the monitor scene.

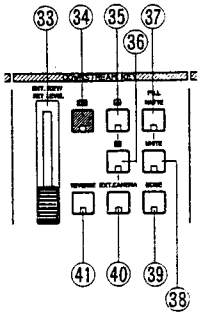
Notes :

- When pressing this button fourth times (Double Picture-in-Picture mode), Matte Colour cannot be selected.
- In the Double Picture-in-Picture mode, the picture quality is not same with it of single Picture-in-Picture mode.
- In the Double Picture-in-Picture mode, position control is available only up or down direction.

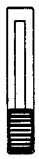
E. Basic Operation 4

E-1. Downstream Key

The following is a detailed description of the Downstream Key block. This function is mainly used for superimposing characters or letters for a telopper. The optional Character Generator WJ-KB50 can be used for this purpose.



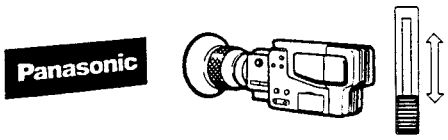
- Set the KEY LEVEL Control (33) to the end low position.



- Select and press the FILL MATTE Button (37) for a Key-Fill signal. The Key-Fill signal fills the key signal. When the FILL MATTE Button (37) is pressed, the desired colour can be chosen from the MATTE GENERATOR.
- Press the EXT. CAMERA Button (40) for a Key Signal. (or A-Button (35) or B-Button (36) can be selected)
- Press the ON Button (34).
- Adjust the KEY LEVEL Control (33) to obtain a clear edge key image.

Example of using the title card option

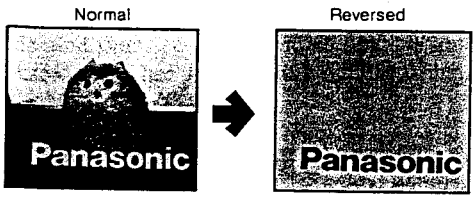
In case a title is written on a black card, adjust the KEY LEVEL Control (33) to obtain a clear edge key image.



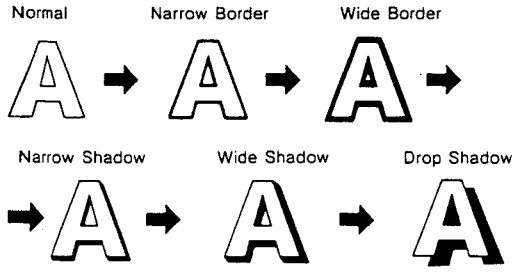
Notes :

1. When the optional Character Generator WJ-KB50 is used for a key source, set the KEY LEVEL Control (33) to the low end position.
2. A jittery EXT. CAMERA signal or a jittery VTR playback signal can cause a disturbance in synchronization.

- When the REVERSE Button (41) is pressed, the keyed image and the background image will be reversed.



Two types (shadow, border) and five kinds of edges are available with the EDGE Button (39).



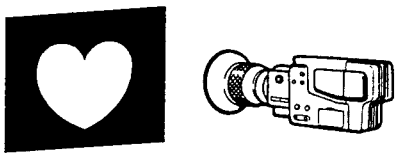
Notes :

1. When a Key image is white, any of 9 colours can be selected for the threshold edge, solid or graded, by pressing the Matte Colour Selector (5) and the Graduation Button (4).
2. Matte Colour key images always have a black edge.
3. When a line colour setting is made at the WJ-KB50, press the Fill-matte Button (37) and select the C/L Bar position.
   When selecting the Matte Button for Bus input or Fade Block, matte colour setting is also made at the WJ-KB50.
   In this time, the up and down of the screen cannot be displayed.
4. When the Double picture-in-picture mode is selected with the WJ-KB50 use, WHITE Button (38) is selected automatically.
   And a line colour setting can be made at the WJ-KB50.
   In this time, the up and down of the screen cannot be displayed.
5. When using the WJ-KB15, the colour setting from the WJ-KB15 is not available.

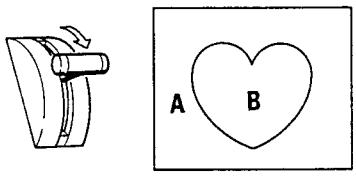
E-2. External Key

Wipe can be made on the image of A using patterns with signals supplied from an external camera.
And the image of B can be displayed in the external key pattern.

- Supply external camera output signals to this mixer.



- Press the Split Wipe Button ⊞ (15) four times.
- The LED on this button blinks.
- Move the Wipe/Mix Lever (58) to the B-bus position from the A-bus position.
- Adjust the Key Slide Control (33) to obtain a clear edge wipe image.



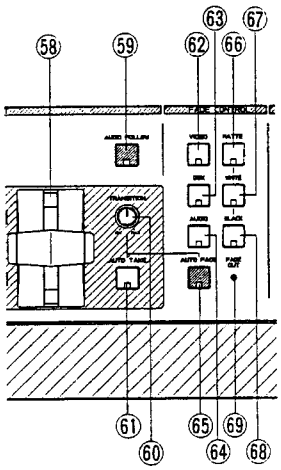
Notes :

- When the video signal of B-bus is the same as that it of the external camera, the perfect pattern may be not available due to the condition of the contrast of the pattern.
- When pressing the Reverse Button (19), image of A and B shown the above will be reversed.
- The External Camera Pattern should be white on a black base.
- The External Camera Pattern can be edged using the Wipe Edge Button (16).

F. Basic Operation 5

Fade

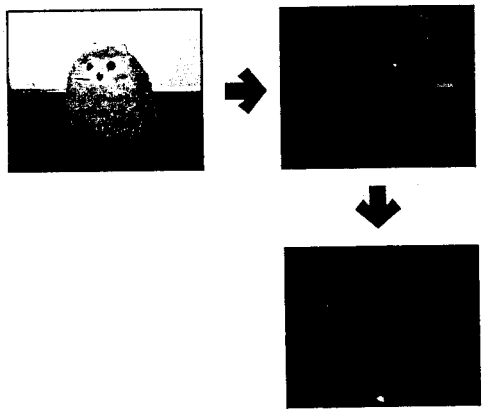
Synchronized fading makes it possible to operate the Video, Downstream Key and Audio fades together, or in any combination. Each of the three can be controlled independently via Auto Fade. The following area shows the FADE CONTROL section.



The VIDEO (62), DSK (63) and /or AUDIO (64) signals can fade out to one of the following : MATTE (66), WHITE (67), BLACK (68) signal.

F-1. Video Fade-Out (In)

- Adjust the TRANSITION Control (60) to the desired auto fading time.
- Press the VIDEO Button (62).
- The LED on this button lights.
- Press the Auto Fade Button (65).
- The LED on this button lights.
- Fade Out Indicator (69) starts blinking (as the fade-out progresses).
- After fade-out, the Fade Out Indicator remains lighted.
- Fade-in operation is made by pressing the Auto Fade Button (65) when the Fade Out Indicator remains lighted.
  After Fade-in, the Fade Out Indicator and LED on the Auto Fade Button go out.

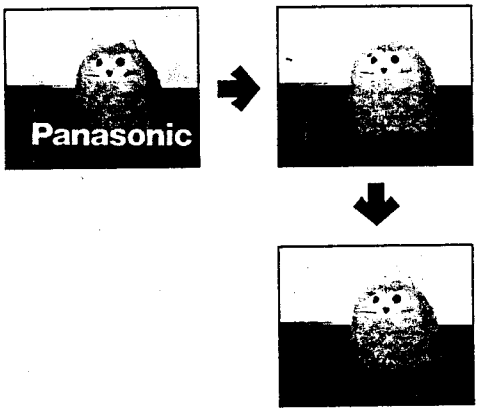


Note :

Auto-fade can be stopped by pressing the Auto Fade Button (65).
The LED on the VIDEO Button (62) blinks while auto fade is in the stopping process. Auto-fade starts again when the Auto Fade Button (65) is pressed.

F-2. Down stream Key Fade-Out (In)

- Adjust the TRANSITION Control (60) to the desired auto fade time.
- Press the DSK Button (63).
- The LED on this button lights.
- Press the Auto Fade Button (65) to execute the auto downstream fade.
- The LED on this button lights.
- Fade Out Indicator (69) starts blinking (as the fade-out progresses).
- After fade-out, the Fade Out Indicator remains lighted.
- Fade-in operation is made by pressing the Auto Fade Button (65) when the Fade Out Indicator remains lighted.
  After Fade-in, the Fade Out Indicator and LED on the Auto Fade Button go out.



Note :

Auto-fade can be stopped by pressing the Auto Fade Button (65).
The LED on the DSK Button (63) blinks while auto fade is in the stopping process. Auto-fade starts again when the Auto Fade Button (65) is pressed.

F-3. Audio Key Fade-Out (In)

- Adjust the TRANSITION Control (60) to the desired auto fading time.
- Press the Audio Fade Button (64).
- The LED on this button lights.
- Press the Auto Fade Button (65) to execute the auto audio fade.
- The LED on this button lights.
- Fade Out Indicator (69) starts blinking (as the fade-out progresses).
- After fade-out, the Fade Out Indicator remains lighted.
- Fade-in operation is made by pressing the Auto Fade Button (65) when the Fade Out Indicator remains lightly. After Fade-in operation, the Fade Out Indicator and LED on the Auto Fade Button go out.

Notes :

1. Auto-fade can be stopped by pressing the Auto Fade Button (65).
   The LED on the Audio Fade Button blinks while auto fade is in the stopping process. Auto-fade starts again when the Auto Fade Button (65) is pressed.
2. The headphone audio does not fade.
3. When MATTE, WHITE or BLACK is selected for a fade out scene, no sound comes out.

Remarks :

1. Any combination of VIDEO, DSK and/or AUDIO can be selected for fading.
2. The fade-out of the video signal is;
   the selected matte colour using MATTE Button (66), the white background using WHITE Button (67), the Black background using BLACK Button (68).
3. Only the outputs selected for fading are processed.

Example 1 :

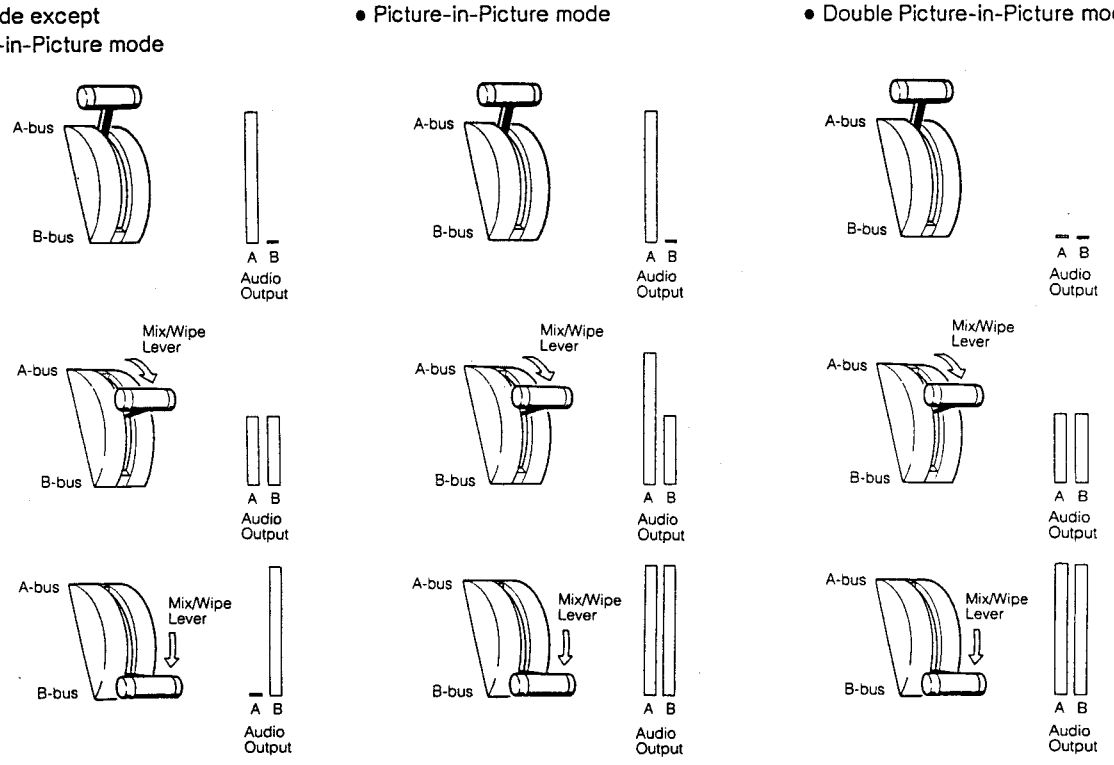
If the VIDEO Button (62) is chosen without the DSK Button (while the Downstream key function is activated), the video portion of the final image will fade and the Downstream Key image will remain on the screen, unfaded.

G. Basic Operation 6

Audio Follow

Audio can be processed either separately or in conjunction with video source selection.
The Audio Follow provides automatic audio ratio mixing (between Source 1 and Source 2 Inputs) via the Mix/Wipe Lever (58) according to the ratio of Source 1 and Source 2 inputs as effected.

- Press the AUDIO FOLLOW Button (59)
- Adjust the Mix/Wipe Lever (58) to the A-bus or B-bus position.
- The audio level ratio between the A-bus and B-bus changes according to the position of the Mix/Wipe Lever (58).



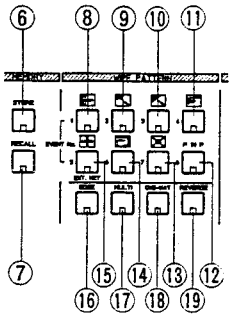
Note :

If AUX and/or MIC inputs are used, they are controlled directly via their respective faders (72), (73) - i.e. they are free of control by the Audio Follow function.

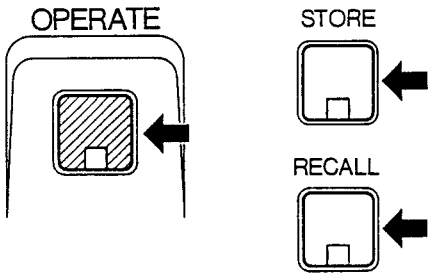
H. Applications

H-1. Event Memory Functions

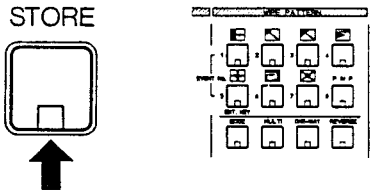
Customized effect combinations can be stored in the Event Memory, and later recalled for subsequent access. The STORE Button (6) is used to store the desired effects.



- To clean/reset the eight memories.
  Press OPERATE Button (1) to turn off. Then, while holding down both STORE Button (6) and RECALL Button (7) press OPERATE Button (1).



- To set a Memory location.
  Choose desired effects on the panel. When the correct combination is selected, press STORE Button (6), then press the appropriate EVENT NO. Buttons (8) - (15). The LED on the EVENT NO. Button (8) - (15) blinks 3 times, then goes out when memory is completed.



- To recall an event setting, press the RECALL Button (7) and correct EVENT NO. Button (8) - (15), then press the AUTO TAKE Button (61).

  Note :

  Up to eight preset event combinations are available. In executing Auto Take successively, each memory operation will be performed in sequence according to the numerical locations used, i.e. only stored numbers will be "toggled" through. So if the No.3 event is skipped in event memory setting, it will also be skipped when the AUTO TAKE Button (61) is pressed.

  Caution :

  The event memory will disappear in a few days if the Main Power Switch (98) is kept off.

- To exit the Event Memory mode.
  Press the RECALL Button (7) again.

H-2. Auto Take

Instead of the lever controlled Mix and Wipe using the Mix/Wipe Lever (58), automatic Mix and Wipe operations can be made using the Auto Take function. Two kinds of Auto Take are available.

1. **Standard Auto Take**

- Set up a Wipe Pattern and Digital Effect as desired.
- Adjust the TRANSITION Control (60) to the desired auto take time.
- Press the AUTO TAKE Button (61).
  Auto-Take can be stopped by pressing the AUTO TAKE Button (61). The LED's on both A-bus and B-bus buttons blink while Auto-Take is in the stopping process. Auto-take starts again when the AUTO TAKE Button (61) is pressed again.

2. **Memory Auto Take**

- Press the RECALL Button (7).
- Select and recall the programmed memory by pressing the EVENT NO. Buttons (8) - (15).
- Press the AUTO TAKE Button (61). The program recalled from the memory is performed. After this, the next Event Number is selected automatically.
- Press the AUTO TAKE Button (61) again. Another program is performed.
- The programs is in memory can be recalled and performed one after another by pressing the AUTO TAKE Button (61) repeatedly.
  Auto-Take cannot be stopped on the way in the Event Memory mode.

H-3. Digital Effects

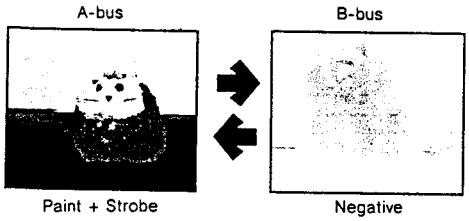
Many unique Digital Effects are available using this Production Mixer. By combining specific digital attributes an experienced user can generate a host of tailored processes for specific applications. Each can be stored in a memory location (Event Memory) for instant recall. Below are a couple of sample combinations.

1. **Auto-Take**

Select the same source input for both the A-bus and B-bus then adjust 2 different digital effect versions which can then be mixed or wiped over each other as desired. For example...

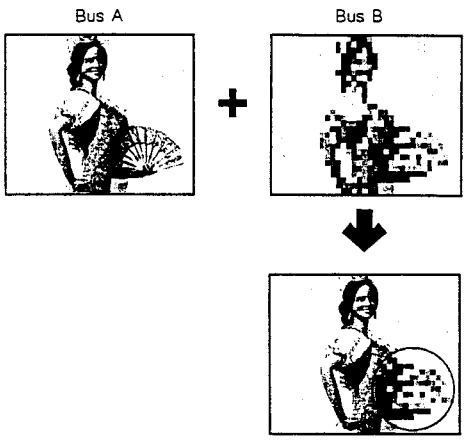
- To reset the functions to the factory set mode, press the OPERATE Button (1) off. Then while holding down both colour-A (49) and B (50) Buttons, press OPERATE Button (1).
- Press and activate the PAINT Button (28) and STROBE Button (27) for the A-bus version. The Mix/Wipe Lever (58) should be turned to A-bus position at this moment.
- Turn the Mix/Wipe Lever (58) to the B-bus position.
- Press the B-Button (22) on the DIGITAL EFFECT block.
- Press the NEGA Button (25).
- Adjust the TRANSITION Control (60) down to "MIN" position.

- Then press the AUTO TAKE Button (61) repeatedly. Two versions adding different digital effects instantly can be switched.



2. Mosaic-Spotlight

- To reset the functions to the factory set mode, press the OPERATE Button (1) off. Then while holding down both colour-A (49) and B (50) Buttons, press OPERATE Button (1).
- Select the same source input for both the A-bus and B-bus.
- The A-bus should have no Digital Effects applied to it by pressing A-Button (A).
- Turn the Mix/Wipe Lever (58) to the B-bus position.
- Press the B-Button (22) on the DIGITAL EFFECT block.
- Press the MOSAIC Button (24).
- Press the Square Button (13) on the WIPE PATTERN block.
- Adjust the Mix/Wipe Lever (58) to obtain the desired wipe size.
- Press the Positioner ON/OFF Button (45).
- The Positioner Joystick (46) now controls the location of the mosaic image.
- If the border is desired to highlight the "anonymous" area, press the EDGE Button (16) on the WIPE PATTERN block.
- If the Reverse function (REVERSE Button (12)) and/or the Monochrome function (MONO Button (32)) is added, more highlight effect can be produced.



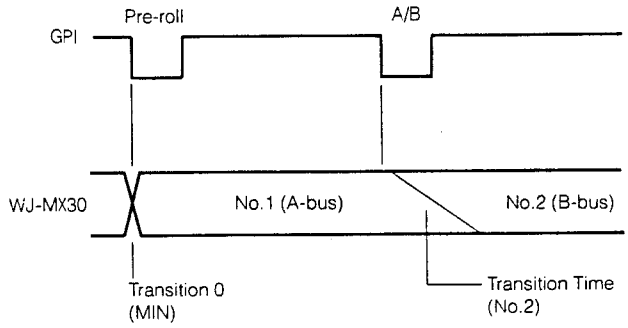
3. After Image

- To reset the functions to the factory set mode, press the OPERATE Button (1) off. Then while holding down both colour-A (49) and B (50) Buttons, press OPERATE Button (1).
- Select the same source input for both the A-bus and B-bus.
- Press the STROBE Button (27).
- Press the MIX Button (52).
- Adjust the TIME Control (26) and Mix/Wipe Lever (58) to obtain the necessary After Image.
- If required, press the A/V Synchro Control (29) to synchronize this effect to the audio.

INTERFACE

1. GP I (General Purpose Interface)

The Auto Take function is activated at the point of the following edge of the GPI pulse .



GPI 1.

When the above signal is used as a GPI signal, follow the procedure shown below.

1. Select the video signal of A-roll for the A-bus signal and the video signal of B-roll for the B-bus signal.
2. Set the Wipe/Mix Lever to the A-bus position.
3. Set the video signal of the A/B - roll to the desired pattern (Mix/Wipe, Wipe Pattern or the like)
4. Set the Auto Fade/Take Transition Control to the 0 position.
5. Store this condition in Event Number Button 1.
6. Set the Wipe/Mix Lever to the B-bus position and adjust the Auto Fade/Take Transition Control to the desired interval.
7. Store this condition to Event Number Button 2.
8. Press the RECALL Button and then Event Number Button (1).

Editing is made with the Event Number 1 condition (A-roll) at the point of the pre-roll.
The A/B-roll is activated at its point with the transition time stored in the Event Number 2.

Event Memory Functions

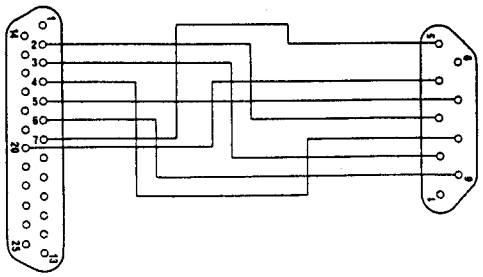
The following set can be stored by the Event Memory Functions.

1. Setting of the all buttons.
2. Setting of the following controls.
   - Transition time
   - Position
   - Colour correction level
   - Mosaic size
   - Key level

The Event Memory Functions can be activated by pressing Auto Take Button.

Conversion Cable Information

Make the required conversion cable referring to the following wiring information.



RS-232C 25-pin		WJ-MX30 9-pin	
2	TXD	1	SPARE
3	RXD	2	RXD
4	RTS	3	TXD
5	CTS	4	DTR
6	DSR	5	SIG.G
7	SIG. G	7	SIG. G
20	DTR	8	RTS
		9	SPARE
			(DCE CONNECTION)

Refer to the table below for the transmitting protocol in connecting the RS-232C to the DT/WJ-MX30.

1	BAUD RATE	9600 bps
2	CHAR SIZE	7 bits
3	PARITY	Odd
4	STOP BIT	1 bit
5	FLCTRL	RTS/CTS

Note :

Be sure to supply the signals for the RS-232C according to the above table.

SPECIFICATIONS

Source Input :	×2 (SOURCE 1/2)
Composite Video Input :	1.0 Vp-p/75 ohms, PAL signal, BNC×2
S-Video Input :	Y signal; 1.0 Vp-p/75 ohms, C signal; 0.3 Vp-p/75 ohms, Mini DIN 4 connector×2
Audio Input :	SOURCE 1/2; Pin-jack×2, −6 dBs/20 Kohms (Unbalanced), Left and Right.
Auxiliary Audio Input :	×1 (Aux) −6 dBs/20 Kohms, Pin-jack (Unbalanced), Left and Right
Microphone Input :	−60 dBv/600 ohms, unbalanced, tip-ring-sleeve type phone jack×1
External Camera Input :	1.0 Vp-p/75 ohms, PAL composite signal, BNC×1 Y signal; 1.0 Vp-p/75 ohms, C signal; 0.3 Vp-p/75 ohms, Min DIN 4 connector×1
GPI Input :	Make-contact, BNC×1
Character (TITLE) Input :	10-pin connector×1 for optional Character Generator WJ-KB15, WJ-KB50
Program Output :	×2 (PROGRAM OUT 1/2)
Composite Video Output :	1.0 Vp-p/75 ohms PAL signal, BNC×2
S-Video Output :	Y signal; 1.0 Vp-p/75 ohms, C signal; 0.3 Vp-p/75 ohms, Min DIN 4 connector×2
Audio Output :	PROGRAM OUT 1/2; Pin Jack×2, −6 dBs/1 Kohms (Unbalanced) Left and Right.
Preview Output :	1.0 Vp-p/75 ohms, PAL composite signal, BNC×1
Advance Sync Output :	4 Vp-p/75 ohms, BNC×2
Headphone Output :	−20 dBv - −80 dBv, 8 ohms unbalanced, tip-ring-sleeve type phone jack×1
Digital Effects :	Nega, Mosaic, Mono, Paint, Still, Strobe, A/V Synchro
Matte Colours :	Colour Bar,White, Yellow, Cyan, Green, Magenta, Red, Blue, Black.
Wipe Patterns :	107 Patterns
Joystick Control :	Positioner, Colour Correction
Audio Mixer :	Source 1, Source 2, AUX, Mic
Others :	Audio-Follow, Auto-Take, Auto-Fade, Memory
Video Sampling :	4 : 1 : 1, Y=14.3 MHz (936 fH), 8-bit component
Frequency Range :	Sync; 15.625 KHz±300 Hz SC; 4.433619 MHz±40 Hz
Frequency Response :	Y/C signal; 4.5 MHz (at −3 dB) Composite Video Signal; 4.5 MHz (at −3 dB) Audio; 20 - 20 KHz (at −3 dB)
Gain :	Unity (Video)
S/N (Typical) :	56 dB (S-Video), 50 dB (Composite), 70 dB (Audio at 1 KHz)
Power Source :	220 - 240V AC 50 Hz
Power Consumption :	Operation mode; Approximately 32W Stand-by mode; Approximately 7W
Ambient Operating Temperature :	0 - 40°C
Ambient Operating Humidity :	Less than 90%
Dimensions :	480 (W)×132 (H)×308 (D) mm
Weight :	4.7 kg

Weight and dimensions indicated above are approximate.
Specifications are subject to change without notice.

OPTIONAL ACCESSORIES

- Character Generator WJ-KB15, WJ-KB50